

SEQUENCE LISTING

<110> Sligar, Steven
Bayburt, Timothy

<120> Membrane Scaffold Proteins

<130> 87-00

<140> Not assigned

<141> 2001-11-20

<150> US 60/252,233

<151> 2000-11-20

<160> 46

<170> PatentIn Ver. 2.0

<210> 1

<211> 762

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(762)

<223> Restriction sites, Nco I and Hind III, are at 5'
and 3' termini.

<400> 1

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agctctaccg ccagaagggtg gagccgctgc gcgcagagct ccaagagggc gcgcgccaga 420
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gcttgggcgc gcgccttgag gctctcaagg agaacggcgg cgccagactg gccgagtacc 600
acgccaaggc caccgagcat ctgagcacgc tcagcgagaa ggccaagccc gcgctcgagg 660
acctccgcca aggcctgctg cccgtgctgg agagcttcaa ggtcagcttc ctgagcgctc 720
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<210> 2

<211> 250

<212> PRT

<213> Homo sapiens

<400> 2

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1 5 10 15
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 20 25 30
 Gly Arg Asp Tyr Val Ser Gln Phe Glu Gly Ser Ala Leu Gly Lys Gln
 35 40 45
 Leu Asn Leu Lys Leu Leu Asp Asn Trp Asp Ser Val Thr Ser Thr Phe
 50 55 60
 Ser Lys Leu Arg Glu Gln Leu Gly Pro Val Thr Gln Glu Phe Trp Asp
 65 70 75 80
 Asn Leu Glu Lys Glu Thr Glu Gly Leu Arg Gln Glu Met Ser Lys Asp
 85 90 95
 Leu Glu Glu Val Lys Ala Lys Val Gln Pro Tyr Leu Asp Asp Phe Gln
 100 105 110
 Lys Lys Trp Gln Glu Glu Met Glu Leu Tyr Arg Gln Lys Val Glu Pro
 115 120 125
 Leu Arg Ala Glu Leu Gln Glu Gly Ala Arg Gln Lys Leu His Glu Leu
 130 135 140
 Gln Glu Lys Leu Ser Pro Leu Gly Glu Glu Met Arg Asp Arg Ala Arg
 145 150 155 160
 Ala His Val Asp Ala Leu Arg Thr His Leu Ala Pro Tyr Ser Asp Glu
 165 170 175
 Leu Arg Gln Arg Leu Ala Ala Arg Leu Glu Ala Leu Lys Glu Asn Gly
 180 185 190
 Gly Ala Arg Leu Ala Glu Tyr His Ala Lys Ala Thr Glu His Leu Ser
 195 200 205
 Thr Leu Ser Glu Lys Ala Lys Pro Ala Leu Glu Asp Leu Arg Gln Gly
 210 215 220
 Leu Leu Pro Val Leu Glu Ser Phe Lys Val Ser Phe Leu Ser Ala Leu
 225 230 235 240
 Glu Glu Tyr Thr Lys Lys Leu Asn Thr Gln
 245 250

<210> 3

<211> 61

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide primer

<400> 3
tataccatgg gccatcatca tcatcatcat atagaaggaa gactaaagct ccttgacaac 60
t 61

<210> 4
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide primer

<400> 4
gcaagcttat tactgggtgt tgagcttctt 30

<210> 5
<211> 654
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Nucleotide
sequence encoding Synthetic peptide.

<400> 5
tataccatgg gccatcatca tcatcatcat atagaaggaa gactaaagct ccttgacaac 60
tgggacagcg tgacctccac cttcagcaag ctgcgcgaac agctcggccc tgtgacctcag 120
gagttctggg ataacctgga aaaggagaca gagggcctga ggcaggagat gagcaaggat 180
ctggaggagg tgaaggccaa ggtgcagccc tacctggacg acttccagaa gaagtggcag 240
gaggagatgg agctctaccg ccagaaggat gagccgctgc gcgcagagct ccaagagggc 300
gaccgcgcgc agctgcacga gctgcaagag aagttgagcc cactgggcga ggagatgcgc 360
gaccgcgcgc gcgcccatgt ggacgcgctg cgcacgcctc tggcccccta cagcgacgag 420
ctgcgccagc gcttgccgcg gcgccttgag gctctcaagg agaacggcgg cgccagactg 480
gccgagtacc acgccaaagg caccgagcat ctgagcacgc tcagcgagaa ggccaaaccc 540
gcgctcgagg acctccgcca aggctgctg cccgtgctgg agagcttcaa ggtcagcttc 600
ctgagcgctc tcgaggagta cactaagaag ctcaacaccc agtaataagc ttgc 654

<210> 6
<211> 212
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 6
Met Gly His His His His His Ile Glu Gly Arg Leu Lys Leu Leu
1 5 10 15
Asp Asn Trp Asp Ser Val Thr Ser Thr Phe Ser Lys Leu Arg Glu Gln
20 25 30

<223> Description of Artificial Sequence:
Oligonucleotide primer

<400> 8
taccatggca aagctccttg acaactggga cagcgtgacc tccaccttca gcaagctgcg 60
cgaacagctc ggccctgtga cccaggagtt ctgggataac ctggaaaagg agacagaggg 120
cctgaggcag gagatgagca aggatctgga ggaggtgaag gccaagggtgc agccctacct 180
ggacgacttc cagaagaagt ggcaggagga gatggagctc taccgccaga aggtggagcc 240
gctgcgcgca gagctccaag agggcgcgcg ccagaagctg cagcagctgc aagagaagtt 300
gagcccactg ggcgaggaga tgcgcgaccg cgcgcgcgcc catgtggacg cgctgcgcac 360
gcatctggcc ccctacagcg acgagctgcg ccagcgcgtt gccgcgcgcc ttgaggctct 420
caaggagaac ggcggcgcca gactggccga gtaccacgcc aaggccaccg agcatctgag 480
cacgctcagc gagaaggcca aaccgcgcgt cgaggacctc cgccaaggcc tgctgcccgt 540
gctggagagc ttcaaggtca gcttcctgag cgctctcgag gactacacta agaagctcaa 600
caccagtaa taagcttgc 619

<210> 9
<211> 201
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 9
Met Ala Lys Leu Leu Asp Asn Trp Asp Ser Val Thr Ser Thr Phe Ser
1 5 10 15
Lys Leu Arg Glu Gln Leu Gly Pro Val Thr Gln Glu Phe Trp Asp Asn
20 25 30
Leu Glu Lys Glu Thr Glu Gly Leu Arg Gln Glu Met Ser Lys Asp Leu
35 40 45
Glu Glu Val Lys Ala Lys Val Gln Pro Tyr Leu Asp Asp Phe Gln Lys
50 55 60
Lys Trp Gln Glu Glu Met Glu Leu Tyr Arg Gln Lys Val Glu Pro Leu
65 70 75 80
Arg Ala Glu Leu Gln Glu Gly Ala Arg Gln Lys Leu His Glu Leu Gln
85 90 95
Glu Lys Leu Ser Pro Leu Gly Glu Glu Met Arg Asp Arg Ala Arg Ala
100 105 110
His Val Asp Ala Leu Arg Thr His Leu Ala Pro Tyr Ser Asp Glu Leu
115 120 125
Arg Gln Arg Leu Ala Ala Arg Leu Glu Ala Leu Lys Glu Asn Gly Gly
130 135 140
Ala Arg Leu Ala Glu Tyr His Ala Lys Ala Thr Glu His Leu Ser Thr
145 150 155 160

Leu Ser Glu Lys Ala Lys Pro Ala Leu Glu Asp Leu Arg Gln Gly Leu
 165 170 175

Leu Pro Val Leu Glu Ser Phe Lys Val Ser Phe Leu Ser Ala Leu Glu
 180 185 190

Glu Tyr Thr Lys Lys Leu Asn Thr Gln
 195 200

<210> 10
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:
 Oligonucleotide primer

<400> 10
 taccatggca aagctccttg acaactg 27

<210> 11
 <211> 61
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:
 Oligonucleotide primer

<400> 11
 tataccatgg gccatcatca tcatcatcat atagaaggaa gactaaagct ccttgacaac 60
 t 61

<210> 12
 <211> 52
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:
 Oligonucleotide primer

<400> 12
 taagaagctc aacacccagg gtaccggtgg aggtagtgga ggtggtaccc ta 52

<210> 13
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:
 Oligonucleotide primer

<400> 13
cagggtaccg gtggaggtag tggaggtggt accctaaagc tccttgacaa 50

<210> 14
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide primer

<400> 14
gcaagcttat tactgggtgt tgagcttctt 30

<210> 15
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide

<400> 15
Gly Thr Gly Gly Gly Ser Gly Gly Gly Thr
1 5 10

<210> 16
<211> 1260
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Nucleotide
sequence encoding a synthetic peptide.

<400> 16
tataccatgg gccatcatca tcatcatcat atagaaggaa gactaaagct ccttgacaac 60
tgggacagcg tgacctccac cttagcaag ctgcggaac agctcggccc tgtgacctag 120
gagttctggg ataacctgga aaaggagaca gagggcctga ggcaggagat gagcaaggat 180
ctggaggagg tgaaggccaa ggtgcagccc tacctggacg acttccagaa gaagtggcag 240
gaggagatgg agctctaccg ccagaagggtg gagccgctgc gcgcagagct ccaagagggc 300
gcgcgccaga agctgcacga gctgcaagag aagctgagcc cactgggcga ggagatgcgc 360
gaccgcgcgc gcgccatgt ggacgcgctg cgcacgcac tggcccccta cagcgacgag 420
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gcagagtacc acgccaaggc caccgagcat ctgagcacgc tcagcgagaa ggccaagccc 540
gcgctcgagc acctccgcca aggcctgctg cccgtgctgg agagcttcaa ggtcagcttc 600
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gacaactggg acagcgtgac ctccaccttc agcaagctgc gcgaacagct cggccctgtg 720
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gagggcgcgc gccagaagct gcacgagctg caagagaagc tgagccactt gggcgaggag 960

Leu Asn Thr Gln Gly Thr Leu Lys Leu Leu Asp Asn Trp Asp Ser Val
 210 215 220
 Thr Ser Thr Phe Ser Lys Leu Arg Glu Gln Leu Gly Pro Val Thr Gln
 225 230 235 240
 Glu Phe Trp Asp Asn Leu Glu Lys Glu Thr Glu Gly Leu Arg Gln Glu
 245 250 255
 Met Ser Lys Asp Leu Glu Glu Val Lys Ala Lys Val Gln Pro Tyr Leu
 260 265 270
 Asp Asp Phe Gln Lys Lys Trp Gln Glu Glu Met Glu Leu Tyr Arg Gln
 275 280 285
 Lys Val Glu Pro Leu Arg Ala Glu Leu Gln Glu Gly Ala Arg Gln Lys
 290 295 300
 Leu His Glu Leu Gln Glu Lys Leu Ser Pro Leu Gly Glu Glu Met Arg
 305 310 315 320
 Asp Arg Ala Arg Ala His Val Asp Ala Leu Arg Thr His Leu Ala Pro
 325 330 335
 Tyr Ser Asp Glu Leu Arg Gln Arg Leu Ala Ala Arg Leu Glu Ala Leu
 340 345 350
 Lys Glu Asn Gly Gly Ala Arg Leu Ala Glu Tyr His Ala Lys Ala Thr
 355 360 365
 Glu His Leu Ser Thr Leu Ser Glu Lys Ala Lys Pro Ala Leu Glu Asp
 370 375 380
 Leu Arg Gln Gly Leu Leu Pro Val Leu Glu Ser Phe Lys Val Ser Phe
 385 390 395 400
 Leu Ser Ala Leu Glu Glu Tyr Thr Lys Lys Leu Asn Thr Gln
 405 410

<210> 18
 <211> 1282
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 nucleotide sequence encoding an artificial
 protein.

<400> 18
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 ggacagcgtg acctccacct tcagcaagct ggcgaacag ctcgccctg tgaccaggga 120
 gttctgggat aacctggaaa aggagacaga ggcctgagg caggagatga gcaaggatct 180
 ggaggaggtg aaggccaagg tgcagcccta cctggacgac ttccagaaga agtggcagga 240

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ggagatggag ctctaccgcc agaaggtgga gccgctgcgc gcagagctcc aagagggcgc 300
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ccgcgcgcgc gcccatgttg acgcgctgcg cacgcatctg gccccctaca gcgacgagct 420
gcgccagcgc ttggccgcgc gccttgaggc tctcaaggag aacggcggcg ccagactggc 480
cgagtaccac gccaaggcca ccgagcatct gagcacgctc agcgagaagg ccaagcccgc 540
gctcgaggac ctccgccaag gcctgctgcc cgtgctggag agcttcaagg tcagcttcct 600
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gagcacgctc agcgagaagg ccaagcccgc gctcgaggac ctccgccaag gcctgctgcc 1200
cgtgctggag agcttcaagg tcagcttcct gagcgctctc gaggagtaca ctaagaagct 1260
caacaccag taataagctt gc 1282

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<210> 19

<211> 422

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 19

Met Gly His His His His His Ile Glu Gly Arg Leu Lys Leu Leu
1 5 10 15

Asp Asn Trp Asp Ser Val Thr Ser Thr Phe Ser Lys Leu Arg Glu Gln
20 25 30

Leu Gly Pro Val Thr Gln Glu Phe Trp Asp Asn Leu Glu Lys Glu Thr
35 40 45

Glu Gly Leu Arg Gln Glu Met Ser Lys Asp Leu Glu Glu Val Lys Ala
50 55 60

Lys Val Gln Pro Tyr Leu Asp Asp Phe Gln Lys Lys Trp Gln Glu Glu
65 70 75 80

Met Glu Leu Tyr Arg Gln Lys Val Glu Pro Leu Arg Ala Glu Leu Gln
85 90 95

Glu Gly Ala Arg Gln Lys Leu His Glu Leu Gln Glu Lys Leu Ser Pro
100 105 110

Leu Gly Glu Glu Met Arg Asp Arg Ala Arg Ala His Val Asp Ala Leu
115 120 125

Arg Thr His Leu Ala Pro Tyr Ser Asp Glu Leu Arg Gln Arg Leu Ala
130 135 140

Ala Arg Leu Glu Ala Leu Lys Glu Asn Gly Gly Ala Arg Leu Ala Glu
145 150 155 160

Tyr His Ala Lys Ala Thr Glu His Leu Ser Thr Leu Ser Glu Lys Ala
165 170 175

Lys Pro Ala Leu Glu Asp Leu Arg Gln Gly Leu Leu Pro Val Leu Glu
180 185 190

Ser Phe Lys Val Ser Phe Leu Ser Ala Leu Glu Glu Tyr Thr Lys Lys
195 200 205

Leu Asn Thr Gln Gly Thr Gly Gly Gly Ser Gly Gly Gly Thr Leu Lys
210 215 220

Leu Leu Asp Asn Trp Asp Ser Val Thr Ser Thr Phe Ser Lys Leu Arg
225 230 235 240

Glu Gln Leu Gly Pro Val Thr Gln Glu Phe Trp Asp Asn Leu Glu Lys
245 250 255

Glu Thr Glu Gly Leu Arg Gln Glu Met Ser Lys Asp Leu Glu Glu Val
260 265 270

Lys Ala Lys Val Gln Pro Tyr Leu Asp Asp Phe Gln Lys Lys Trp Gln
275 280 285

Glu Glu Met Glu Leu Tyr Arg Gln Lys Val Glu Pro Leu Arg Ala Glu
290 295 300

Leu Gln Glu Gly Ala Arg Gln Lys Leu His Glu Leu Gln Glu Lys Leu
305 310 315 320

Ser Pro Leu Gly Glu Glu Met Arg Asp Arg Ala Arg Ala His Val Asp
325 330 335

Ala Leu Arg Thr His Leu Ala Pro Tyr Ser Asp Glu Leu Arg Gln Arg
340 345 350

Leu Ala Ala Arg Leu Glu Ala Leu Lys Glu Asn Gly Gly Ala Arg Leu
355 360 365

Ala Glu Tyr His Ala Lys Ala Thr Glu His Leu Ser Thr Leu Ser Glu
370 375 380

Lys Ala Lys Pro Ala Leu Glu Asp Leu Arg Gln Gly Leu Leu Pro Val
385 390 395 400

Leu Glu Ser Phe Lys Val Ser Phe Leu Ser Ala Leu Glu Glu Tyr Thr
405 410 415

Lys Lys Leu Asn Thr Gln
420

<210> 20
<211> 43
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide primer

<400> 20
tggagctcta cgcgagaag gtggagccct acagcgacga gct

43

<210> 21
<211> 30
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:
Oligonucleotide primer

<400> 21
gcaagcttat tactgggtgt tgagcttctt

30

<210> 22
<211> 522
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
nucleotide sequence encoding an artificial
peptide.

<400> 22
tataccatgg gccatcatca tcatcatcat atagaaggaa gactaaagct ccttgacaac 60
tgggacagcg tgacctccac cttcagcaag ctgcgcgaac agctcggccc tgtgacccag 120
gagttctggg ataacctgga aaaggagaca gagggcctga ggcaggagat gagcaaggat 180
ctggaggagg tgaaggccaa ggtgcagccc tacctggacg acttccagaa gaagtggcag 240
gaggagatgg agctctaccg ccagaagggtg gagccctaca gcgacgagct gcgccagcgc 300
ttggccgcgc gccttgaggc tctcaaggag aacggcggcg ccagactggc cgagtaccac 360
gccaaggcca ccgagcatct gagcacgctc agcgagaagg ccaaaccgcg gctcgaggac 420
ctccgccaag gcctgctgcc cgtgctggag agcttcaagg tcagcttcct gagecgtctc 480
gaggagtaca ctaagaagct caacaccag taataagctt gc 522

<210> 23
<211> 168
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
peptide

<400> 23

Met Gly His His His His His Ile Glu Gly Arg Leu Lys Leu Leu
1 5 10 15

Asp Asn Trp Asp Ser Val Thr Ser Thr Phe Ser Lys Leu Arg Glu Gln
20 25 30

Leu Gly Pro Val Thr Gln Glu Phe Trp Asp Asn Leu Glu Lys Glu Thr
35 40 45

Glu Gly Leu Arg Gln Glu Met Ser Lys Asp Leu Glu Glu Val Lys Ala
50 55 60

Lys Val Gln Pro Tyr Leu Asp Asp Phe Gln Lys Lys Trp Gln Glu Glu
65 70 75 80

Met Glu Leu Tyr Arg Gln Lys Val Glu Pro Tyr Ser Asp Glu Leu Arg
85 90 95

Gln Arg Leu Ala Ala Arg Leu Glu Ala Leu Lys Glu Asn Gly Gly Ala
100 105 110

Arg Leu Ala Glu Tyr His Ala Lys Ala Thr Glu His Leu Ser Thr Leu
115 120 125

Ser Glu Lys Ala Lys Pro Ala Leu Glu Asp Leu Arg Gln Gly Leu Leu
130 135 140

Pro Val Leu Glu Ser Phe Lys Val Ser Phe Leu Ser Ala Leu Glu Glu
145 150 155 160

Tyr Thr Lys Lys Leu Asn Thr Gln
165

<210> 24
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide primer

<400> 24
cagaattcgc tagccgagta ccacgcaa

29

<210> 25
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
Oligonucleotide primer

peptide

<400> 29

Met Gly His His His His His His Ile Glu Gly Arg Leu Lys Leu Leu
1 5 10 15

Asp Asn Trp Asp Ser Val Thr Ser Thr Phe Ser Lys Leu Arg Glu Gln
20 25 30

Leu Gly Pro Val Thr Gln Glu Phe Trp Asp Asn Leu Glu Lys Glu Thr
35 40 45

Glu Gly Leu Arg Gln Glu Met Ser Lys Asp Leu Glu Glu Val Lys Ala
50 55 60

Lys Val Gln Pro Tyr Leu Asp Asp Phe Gln Lys Lys Trp Gln Glu Glu
65 70 75 80

Met Glu Leu Tyr Arg Gln Lys Val Glu Pro Leu Arg Ala Glu Leu Gln
85 90 95

Glu Gly Ala Arg Gln Lys Leu His Glu Leu Gln Glu Lys Leu Ser Ala
100 105 110

Arg Leu Ala Glu Tyr His Ala Lys Ala Thr Glu His Leu Ser Thr Leu
115 120 125

Ser Glu Lys Ala Lys Pro Ala Leu Glu Asp Leu Arg Gln Gly Leu Leu
130 135 140

Pro Val Leu Glu Ser Phe Lys Val Ser Phe Leu Ser Ala Leu Glu Glu
145 150 155 160

Tyr Thr Lys Lys Leu Asn Thr Gln
165

<210> 30

<211> 77

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
nucleotide

<400> 30

taccatgggt catcatcatc atcatcacat tgaggacgt ctgaagctgt tggacaattg 60
ggactctgtt acgtcta 77

<210> 31

<211> 62

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
nucleotide

<400> 31

aggaattctg ggacaacctg gaaaaagaaa ccgagggact gcgtcaggaa atgtccaaag 60
at 62

<210> 32

<211> 54

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
nucleotide

<400> 32

tatctagatg actttcagaa aaaatggcag gaagagatgg aattatatcg tcaa 54

<210> 33

<211> 73

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
nucleotide

<400> 33

atgagctcca agagaagctc agcccattag gcgaagaaat gcgcgatcgc gcccggtgcac 60
atgttgatgc act 73

<210> 34

<211> 65

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
nucleotide

<400> 34

gtctcgaggc gctgaaagaa aacgggggtg cccgcttggc tgagtaccac gcgaaagcga 60
cagaa 65

<210> 35

<211> 56

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
nucleotide

<400> 35
gaagatctac gccagggctt attgcctgtt cttgagagct ttaaagtcag ttttct 56

<210> 36
<211> 61
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
nucleotide

<400> 36
cagaattcct gcgtcacggg gccagttgt tcgcgaagtt tactgaaggt agacgtaaca 60
g 61

<210> 37
<211> 55
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
nucleotide

<400> 37
tcattctagat atggctgaac cttggccttc acctcttcta aatctttgga cattt 55

<210> 38
<211> 80
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
nucleotide

<400> 38
tggagctcat ggagtttttg gcgtgcccc tcttgagtt ccgcacgcag cggttccacc 60
ttttgacgat ataattccat 80

<210> 39
<211> 76
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
nucleotide

<400> 39
gcctcgagac gtgcggccaa acgctggcga agttcatccg aatacggcgc caaatgagtc 60
cggagtgcac caacat 76

<210> 40

<211> 61
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
nucleotide

<400> 40

gtagatcttc cagcgccggt ttcgcttttt cgctcaaggt gctcaggtgt tctgtcgctt 60
t 61

<210> 41

<211> 66

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
nucleotide

<400> 41

ccaagcttat tactgggtat tcagcttttt agtatattct tccagagctg acagaaaact 60
gacttt 66

<210> 42

<211> 651

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
nucleotide

<400> 42

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<211> 201

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic
peptide

<400> 43

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Asp Asn Trp Asp Ser Val Thr Ser Thr Phe Ser Lys Leu Arg Glu Gln
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Leu Gly Pro Val Thr Gln Glu Phe Trp Asp Asn Leu Glu Lys Glu Thr
35 40 45

Glu Gly Leu Arg Gln Glu Met Ser Pro Tyr Leu Asp Asp Phe Gln Lys
50 55 60

Lys Trp Gln Glu Glu Met Glu Leu Tyr Arg Gln Lys Val Glu Pro Leu
65 70 75 80

Arg Ala Glu Leu Gln Glu Gly Ala Arg Gln Lys Leu His Glu Leu Gln
85 90 95

Glu Lys Leu Ser Pro Leu Gly Glu Glu Met Arg Asp Arg Ala Arg Ala
100 105 110

His Val Asp Ala Leu Arg Thr His Leu Ala Pro Tyr Ser Asp Glu Leu
115 120 125

Arg Gln Arg Leu Ala Ala Arg Leu Glu Ala Leu Lys Glu Asn Gly Gly
130 135 140

Ala Arg Leu Ala Glu Tyr His Ala Lys Ala Thr Glu His Leu Ser Thr
145 150 155 160

Leu Ser Glu Lys Ala Lys Pro Ala Leu Glu Asp Leu Arg Gln Gly Leu
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Leu Pro Val Leu Glu Ser Phe Lys Val Ser Phe Leu Ser Ala Leu Glu
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Glu Tyr Thr Lys Lys Leu Asn Thr Gln
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<210> 44

<211> 201

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
peptide

<400> 44

Met Gly His His His His His Ile Glu Gly Arg Leu Lys Leu Leu
1 5 10 15

Asp Asn Trp Asp Ser Val Thr Ser Thr Phe Ser Lys Leu Arg Glu Gln
20 25 30

